

computer 40 then performs step S225 to enter the loop of steps S226 through S228. Step S228 becomes YES at n equals 7 and carriage 1 is moved to the store position in subroutine L2 as shown in FIG. 38C.

After reaching subroutine L8, microcomputer 40 moves a stocker 14 to the position S shown in FIG. 38D, and performs subroutine L4 to move single play carriage S to the load position in tray 7, as shown in FIG. 38E. Microcomputer 40 then moves optical head base 11 to the up position in subroutine L7 FIG. 38F, and proceeds to the stop mode (FIGS. 9A through 9D) to detect the operation of mode switches stock switch 41, eject/load switch 42, stop switch 44, carriage S selection switch 45 and carriages 1-6 selection switch 46.

As described in examples 8 through 14, if play switch 43 is operated during a single-play operation, single play carriage S is inserted in tray 7, microcomputer 40 directs player 100 to play only the disc in tray 7.

If play switch 43 is operated when a changer-play operation carriage m ( $1 \leq m \leq 6$ ) is in tray 7, microcomputer 40 directs player 100 into a changer-play mode for playing discs on carriages m through 6 in order and a disc, if present, on carriage S afterwards. Even when there is no disc on single play carriage S, single play carriage S is inserted in tray 7, prepare for single-play mode operation.

#### OPERATING EXAMPLE 15

Operating example 15 is described with reference to FIGS. 1, 5, 9C and 39A through 39F.

In this example, tray 7 with carriage 3 installed is in the load position, and there are discs present on single play carriage S and carriages 2, and 3 and 6, as shown in FIG. 39A. When carriage S selection switch 45 is operated, microcomputer 40 goes to the stop mode (FIG. 9C) and performs steps S4, S110, and subroutine L1 that moves optical head base 11 to the down position, as shown in FIG. 39B. Microcomputer 40 then performs subroutine L2 to move carriage 3 to its store position in stocker 14, as shown in FIG. 39C.

When microcomputer 40 performs subroutine L8, stocker 14 moves to position 5, as shown in FIG. 39D, and carriage S is moved from its store position in stocker 14 to the load position in tray 7 by subroutine L4, as shown in FIG. 39E. Subroutine L7 moves optical head base 11 to the up position and clamps disc D at stand-by for playback, as shown in FIG. 39F. Microcomputer 40 then monitors the operation of stock switch 41, eject/load switch 42, stop switch 44, carriage S selection switch 45, and carriages 1-6 selection switch 46.

#### OPERATING EXAMPLE 16

Operating example 16 is described with reference to FIGS. 1, 5, 9D and 40A through 40P.

In this example, tray 7 with single play carriage S installed is in the load position, there is a disc in single play carriage S and carriage 2, 6 but carriages 1 and 3 through 5 are empty, as shown in FIG. 40A.

When carriages 1-6 selection switch 46 is operated, microcomputer 40 goes to the stop mode (FIG. 9D), and performs steps S5 and S130 which become YES because a carriage S is installed in tray 7. Microcomputer 40 then performs step S131, and the loop of steps S132 through S134. Step S132 becomes YES because, n is equal to 2. Subroutine L1 moves optical head base 11 to the down position, as shown in FIG. 40B. Subroutine L2 moves single play carriage S to the store position FIG. 40C.

When microcomputer 40 performs subroutine L8, it moves stocker 14 to position 2, as shown in FIG. 40D. Subroutine L4 then moves carriage 2 to the load position in a subroutine L4, as shown in FIG. 40E. Subroutine L7 then moves optical head base 11 to the up position clamping disc D at stand-by for playback, as shown in FIG. 40F, and monitors the operation of stock switch 41, eject/load switch 42, stop switch 44, carriage S selection switch 45 and carriages 1-6 selection switch 46.

When carriages 1-6 selection switch 46 is operated again, microcomputer 40 performs step S5 and then step S130 which becomes NO because carriage 2 is in tray 7. Microcomputer 40 then performs the loop of steps S136 through S140, wherein step S137 becomes YES because n=6. Microcomputer 40 performs subroutine L1 to move optical head base 11 to the down position, as shown in FIG. 40G, and, in subroutine L2, moves carriage 2 to the store position, as shown in FIG. 40H.

Microcomputer 40 then performs subroutine L8, moving stocker 14 to position 6, as shown in FIG. 40I. Then, carriage 6 is moved to the load position as microcomputer 40 performs subroutine L4 as shown in FIG. 40J. Microcomputer 40 then moves optical head base 11 to the up position in a subroutine L7 to clamp disc D at stand-by for playback, as shown in FIG. 40K, and then monitors the operation of stock switch 41, eject/load switch 42, stop switch 44, carriage S selection switch 45 and carriages 1-6 selection switch 46.

When carriages 1-6 selection switch 46 is manipulated again, microcomputer 40 proceeds from step S5 to step S130 which becomes NO since a carriage 6 is in tray 7. Tray 7 then performs the loop of steps S136 through S140, wherein step S137 becomes YES because n=2. Microcomputer 40 then performs subroutine L1 to move optical head base 11 to the down position, as shown in FIG. 40L. Carriage 6 is then moved to its store position in stocker 14 by subroutine L2, as shown in FIG. 40M.

When microcomputer 40 performs subroutine L8, it moves stocker 14 to position 2, as shown in FIG. 40N. Microcomputer 40 then performs subroutine L4 to move carriage 6 to the load position, as shown in FIG. 40O. Optical head base 11 is moved to the up position in subroutine L7 and clamps disc D at stand-by for play, as shown in FIG. 40P. Microcomputer 40 then monitors the operation of stock switch 41, eject/load switch 42, stop switch 44, carriage S selection switch 45 and carriages 1-6 selection switch 46.

Similarly, the discs on carriages 2 and 6 are alternately set to stand-by for play every time a carriages 1-6 selection switch 46 is manipulated.

As described in examples 15 and 16, if carriage S selection switch 45 is operated when a changer-play operation carriage, 1 through 6 is inserted in tray 7, microcomputer 40 directs player 100 to move that carriage into its storage position in stocker 14 and insert single play carriage S into tray 7 to prepare for single-play mode.

If carriages 1-6 selection switch 46 is operated when single play carriage S is in tray 7, microcomputer 40 moves single play carriage S into its storage position in stocker 14 and inserts carriages 1 through 6 whereon discs are present into tray 7 in numerical order in a cyclic manner and prepares for operation in the changer-play mode.

The representative operation examples of the present invention are described in the examples 1 through 15 above. However, other operational routines are possible within the programs illustrated in flow charts 9A through 9D (stop mode), 18A through 18C (eject mode) and 21A through 21D (play mode).